

**From:** [Turner.Kevin@epamail.epa.gov](mailto:Turner.Kevin@epamail.epa.gov)  
**To:** [Tom Binz](#)  
**Subject:** Fw: EBMP and Method ASTM D1946  
**Date:** Tuesday, June 15, 2010 12:13:15 PM

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From: "Atul Salhotra" <asalhotra@ramgp.com>  
To: Kevin Turner/R5/USEPA/US@EPA  
Cc: STEVEN FARYAN/R5/USEPA/US@EPA, Michelle Majack/R5/USEPA/US@EPA, <Chris.Cahnovsky@illinois.gov>, <robert\_veenstra@URSCorp.com>, Michelle Watters/R5/USEPA/US@EPA, <David.R.Webb@Illinois.gov>, <tbinz@pe-engrs.com>, Brian Barwick/R5/USEPA/US@EPA  
Date: 06/26/2009 10:42 PM  
Subject: RE: EBMP and Method ASTM D1946

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Kevin:

Thank you for the e mail. Several of the issues you have raised in the e mail were discussed yesterday and so I will not repeat them.

The primary purpose of my response is to thank you and commend you for the decision that you have made regarding the ASTM D 1946 sampling. I know, for a variety of reasons, it is very hard for you to deviate from what has been done in the past. I will continue to present you with recommendations based on technically defensible evaluation of data to help us stay focused on the protection of human health and removal of free product in the most efficient manner.

Thank you once again and I look forward to your decision regarding the quarterly groundwater sampling event.

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-----Original Message-----

From: Turner.Kevin@epamail.epa.gov [<mailto:Turner.Kevin@epamail.epa.gov>]  
Sent: Thursday, June 25, 2009 8:11 AM  
To: asalhotra@ramgp.com  
Cc: Faryan.Steven@epamail.epa.gov; Majack.Michelle@epamail.epa.gov; Chris.Cahnovsky@illinois.gov; robert\_veenstra@URSCorp.com; Watters.Michelle@epamail.epa.gov; David.R.Webb@Illinois.gov; tbinz@pe-engrs.com; Barwick.Brian@epamail.epa.gov  
Subject: EBMP and Method ASTM D1946

Atul,

The agency (U.S. EPA) and our partners have reviewed your request to drop ASTM D1946 analyses from the Event Based Monitoring Program (EBMP). This request appears to be based on your analysis of data from two EBMP samplings which Apex undertook (April 29 and May 17, 2009) and was presented at the HWG/Apex/Agency face-to-face meeting on June 10, 2009.

Though the over-all consensus of the group is that the analyses of two events and subsequently decision making is not necessarily statistically defensible, the agency is willing to conditionally modify the approved protocols of the EBMP in order to make the overall project better. In part, the data collected from ASTM D1946 is used as a cross check to the screening values collected from the Tedlar bag samples. This cross check between field sampling and laboratory analysis assures the regulatory agencies that Tedlar bag samples, the instrumentation in the field trailer and the personnel performing these activities are performing correctly. This type of cross checking is analogous to field sampling duplication, split sampling or data validation.

As you stated in your June 10, 2009 presentation, ASTM D1946 is the laboratory method used to analyze for O2, CO2 and CH4 from a sample collected from a Summa canister. The April 2008, EBMP states that residential monitoring locations will be sampled using vacuum/pressure measurements and Tedlar bag soil vapor samples for field screening (PID, FID, O2, CO2 and methane) and indoor air measurements using Summa canisters collected concurrently, over a 24 hour period. Under the April 2008, EBMP, indoor air sampling does not include the collection of Tedlar bag samples.

Though the approved April 2008 EBMP states that a PID and FID shall be

used as part of the screening process, Apex has unilaterally decided to use only an FID to analyze the contents of a Tedlar bag. An FID detector, though calibrated to methane, reads for total organics and does not differentiate between total methane and total organics. Therefore, EPA continues to require the use of a PID device as part of the screening process.

Because of the Agencies need to assure quality data for the protection of human health and the environment, the following modifications to the EBMP are hereby approved:

- The only sampling for indoor air is through a Summa canister. Because there is only one method for sampling indoor air, ASTM D1946 analyses shall remain for all indoor air EBMP sampling. Thereby methane is included.
- For sub slab monitoring within the EBMP, ASTM D1946 analysis can be reduced down to 10% of the total number of sub slab summa canisters samples. (i.e. as part of the EBMP, if Apex takes 30 sub slab summa canisters then 3 must be sampled using ASTM D 1946). The samples that represent the 10% may not be from the same sub slab port in subsequent EBMP sampling. They must be rotated between the various sub slab monitoring ports in various structures.

Additionally, as a means to help guide Apex the Agency recommends the use of additional hand-held field instrumentation such as the GEM 2000 (Landtec) which samples for methane %LEL methane CO, O2, CO2 .

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